genous compounds are carried out in the green leaf and aided by sunlight. Rain-water collected for a considerable time contains no nitrites, all having been oxidized to nitrates; but if exposed to bright sunlight or ultra-violet light for a few hours a strong reaction for nitrites is always obtained.

There is no hydrogen peroxide or ozone in air at surface level. The fresh odor in open air, commonly referred to as "ozone," is probably nitrogen trioxide, which at high dilutions has the odor of ozone. The oxides of nitrogen are probably formed by the action of sunlight, rich in ultra-violet rays, in upper regions of the atmosphere upon air and aqueous vapor.

CENTENNIAL OF METEOROLOGICAL STATION AT THE GRAND SAINT-BERNARD.[1]

By R. GAUTIER.

[*Abstract of* paper presented to Swiss Society of Geophysics, etc., Zurich, Sept. 11, 1917.]

On the occasion of the centennial of the installation of a meteorological station at the Hospice of the Grand Saint-Bernard by Marc-Auguste Pictet, September 15, 1817, the director of the Observatory of Geneva, Mons. R. Gautier, proposed to the general assembly of the Société Helvétique des Sciences Naturelles that there be transmitted to the canons of the Grand Saint-Bernard, a memorial bearing a large number of signatures of members of the society.

In this connection Mons. Gautier made some remarks concerning the installation, and the gradual improvement of the station in 1829 by Auguste de la Rive, afterward several renewals by Émile Plantamour in 1883, by Émile Gautier, and finally in 1900, 1903, 1916, and 1917, by himself.

In 1900 the station was transferred from the old building to the new one, and since that time the observing hours—which had been following the changes in effect at the Geneva Observatory—have been fixed at the three official terms for all the Swiss meteorological réseau.

Interesting climatological results are given in Ch. Bührer's note "Le Climat du Grand St.-Bernard" (Lausanne, 1911), and in the splendid monograph "Das Klima der Schweiz" by Maurer & Bilwiller. There is in preparation at the Geneva Observatory, a work on the whole 100 years of observations.

TIME-ZONES AT SEA.

[From the report of the Council of the Royal Society of Great Britain, as *abstracted in* Nature, London, Dec. 6, 1917, p. 275.]

The possibility of introducing a more convenient system of timekeeping at sea has lately been under consideration, both in Great Britain and in France. The conclusions reached at a conference under the chairmanship of the Hydrographer to the Admiralty, in which representatives of scientific societies took part, are included in the report of the council. The most practical method of obtaining uniformity is considered to be the establishment, outside territorial waters, of zones corresponding with the hourly zones on land. It is proposed that the zone extending from 7½° east to 7½° west of Greenwich should be the zero zone, and that the other zones west and east should be respectively described as *plus* or *minus*, with an indication of the actual correction required for reduction to Greenwich time and date. On this system "+12" would be the half-zone east of the "date line" and "−12" the half-zone west. Any alteration of the time of clocks in ships should always be one hour, but the instant of making the change need not necessarily be that of passing to a new zone. In the case of self-recording meteorological instruments, which it would be difficult to adjust for changing zone time, Greenwich time is considered most convenient, but ship's time should be used for the regular observations. If the proposed zone times be generally adopted, it is recommended that the receipt and dispatch of telegraphic and other messages should for the immediate future be recorded in zone time; but, eventually, it would be most convenient for such purposes to adopt Greenwich time throughout the world.

[1] *R. Gautier* (Genève). Le Centenaire du Grand St-Bernard. Arch. des sci. phys. et nat., Genève, 15. Nov. 1917, 44: 351.

Baron Dairoku Kikuchi, 1855–1917.

By Dr. T. C. MENDENHALL.

[*Dated:* Ravenna, Ohio, Jan. 14, 1918.]

Baron Dairoku Kikuchi, one of Japan's most distinguished educators and men of science, whose death occurred in August last, was so well known in America, not only through his published works but also personally, that something more than a formal obituary note will doubtless be welcomed by readers of the MONTHLY WEATHER REVIEW.

Dr. Baron Dairoku Kikuchi, privy councilor, president of the Imperial Academy, honorary professor of the Imperial University at Tokyo and also of the Imperial University at Kyoto, was born on March 17, 1855, in the city of Yedo, now Tokyo. Both his father and grandfather were noted scholars in their day, especially in the, to them, greatly restricted area of human knowledge known to the Japanese as "Western learning."

The system of heirship by adoption and change of name, so long in use in Japan, gives rise to much confusion among foreigners regarding relationship and many men of science in Europe and America who have known and admired both Kikuchi, minister of education, mathematician and author of many works, and Mitsukuri, eminent zoologist and writer of international reputation, have not known or suspected that they were brothers. Kikuchi's father was Shuhei Mitsukuri, who had been adopted by Gempo Mitsukuri as his heir. He had belonged to the house of Kikuchi, and to this name his son Dairoku succeeded when it was vacated by his father. Dr. Kakichi Mitsukuri, the distinguished naturalist, was a younger brother and bore the name of the father.

In his early boyhood Kikuchi was famed for his precocity, and it is said that at the age of 9 years he was "a teacher of others." In 1866 the old Shogunate Government sent to England a number of promising young men, who were to absorb the best, if possible, of that Western learning and culture which was already pounding heavily at the closed portals of Japan. Many of these afterward rose to distinction and the youngest of them all was Dairoku Kikuchi, 11 years of age. In two years he returned to his native land, when again, at the mature (?) age of 13 years, he engaged in teaching. At the same time he was a most industrious student, and two years later he was ordered back to Europe to complete his studies. In the University of London, and afterward at Cambridge, he distinguished himself. He was one of the "wranglers" of the latter, of the year 1877, a group of